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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/723,362	11/26/2003	Bo-Lennart Johansson	PU9951	6183
22840	7590	12/05/2005	EXAMINER	
AMERSHAM BIOSCIENCES PATENT DEPARTMENT 800 CENTENNIAL AVENUE PISCATAWAY, NJ 08855			THERKORN, ERNEST G	
			ART UNIT	PAPER NUMBER
			1723	

DATE MAILED: 12/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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<b>Office Action Summary</b>	<b>Application No.</b> 10/723,362	<b>Applicant(s)</b> JOHANSSON ET AL.	
	<b>Examiner</b> Ernest G. Therkorn	<b>Art Unit</b> 1723	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 09 November 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 15-21 is/are pending in the application.
- 4a) Of the above claim(s) 17-21 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 15 and 16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Meiller (U.S. Patent No. 4,100,149) in view of either Biebricher (U.S. Patent No. 4,177,038) or Riethorst (U.S. Patent No. 4,883,598). At best, the claims differ from Meiller (U.S. Patent No. 4,100,149) in reciting use of a spacer. Biebricher (U.S. Patent No. 4,177,038) (column 1, lines 34-40) discloses that a spacer increases the distance between the matrix and the ligand to counteract steric interference. Riethorst (U.S. Patent No. 4,883,598) (column 6, lines 9-34) discloses spacers between amino groups functioning as ligands and a carrier material yield unexpected results with a higher yield, more reproducible result, more specific adsorption, and a purer product. It would have been obvious to use a spacer in Meiller (U.S. Patent No. 4,100,149) either because Biebricher (U.S. Patent No. 4,177,038) (column 1, lines 34-40) discloses that a spacer increases the distance between the matrix and the ligand to counteract steric interference or because Riethorst (U.S. Patent No. 4,883,598) (column 6, lines 9-34) discloses spacers between amino groups functioning as ligands and a carrier material

yield unexpected results with a higher yield, more reproducible result, more specific adsorption, and a purer product.

The remarks urge that examining the additional two inventions would not be a serious burden on the examiner. However, the additional searching and different issues of patentability would be an enormous burden on the examiner. Accordingly, the restriction requirement has been reconsidered, deemed proper, and made final for the reasons of record.

The remarks urge patentability based upon the allegation that the claims include numerous compounds that attach the aromatic ring to the quarternized nitrogen other than Meiller (U.S. Patent No. 4,100,149)'s methylene. However, claim 15's "linear hydrocarbon group" reads on Meiller (U.S. Patent No. 4,100,149)'s methylene.

The remarks urge that Riethorst (U.S. Patent No. 4,883,598) is not directed to ion exchangers and protein separation. However, a fair reading of Riethorst (U.S. Patent No. 4,883,598) on column 2, lines 41-49 combined with column 5, lines 48-59 would indicate that Riethorst (U.S. Patent No. 4,883,598) discloses ion exchangers. Riethorst (U.S. Patent No. 4,883,598)'s column 6, lines 18-26 use of a relatively long spacer is disclosed to lead to a more specific adsorption of proteins producing a higher purity protein product.

The remarks urge that there is no motivation to use a spacer in Meiller (U.S. Patent No. 4,100,149). Biebricher (U.S. Patent No. 4,177,038) (column 1, lines 34-40) discloses that a spacer increases the distance between the matrix and the ligand to counteract steric interference. Riethorst (U.S. Patent No. 4,883,598) (column 6, lines 9-

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34) discloses spacers between amino groups functioning as ligands and a carrier material yield unexpected results with a higher yield, more reproducible result, more specific adsorption, and a purer product. Motivation exists to use a spacer in Meiller (U.S. Patent No. 4,100,149) either because Biebricher (U.S. Patent No. 4,177,038) (column 1, lines 34-40) discloses that a spacer increases the distance between the matrix and the ligand to counteract steric interference or because Riethorst (U.S. Patent No. 4,883,598) (column 6, lines 9-34) discloses spacers between amino groups functioning as ligands and a carrier material yield unexpected results with a higher yield, more reproducible result, more specific adsorption, and a purer product.

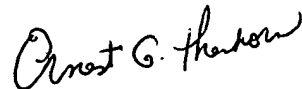
**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication should be directed to E. Therkorn at telephone number (571) 272-1149. The official fax number is 571-272-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



**Ernest G. Therkorn**  
**Primary Examiner**  
**Art Unit 1723**

EGT  
November 29, 2005